

REMARKS

This Amendment responds to the Office Action mailed July 10, 2009 in the above-identified application. Based on the foregoing amendments and the following comments, allowance of the application is respectfully requested.

Claims 1-12, 25-36 and 38 are pending in the application. By this Amendment, claim 25 has been amended. The amendment finds clear support in the original application at least at page 27, lines 17-20; page 28, line 22 to page 29, line 1; and page 29, line 7 to page 30, line 2. No new matter has been added.

The Examiner has objected to the drawings as not showing “overlay nodes in the second multicast tree disseminating message traffic independent of content.” This limitation has been deleted from amended claim 25. Accordingly, withdrawal of the objection to the drawings is respectfully requested.

The Examiner has objected to the specification as failing to provide proper antecedent basis for the claimed subject matter and has rejected claims 25-35 and 38 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Applicants do not necessarily concur with the rejection. Nonetheless, in order to advance prosecution of the application, claim 25 has been amended to delete the limitation identified in the rejection. Accordingly, withdrawal of the objection to the specification and the rejection under 35 U.S.C. §112, first paragraph, is respectfully requested.

The Examiner has rejected claims 1, 2, 5, 11 and 36 under 35 U.S.C. §103(a) as unpatentable over Scribe (Article entitled: “*Scribe: A Large-Scale and Decentralized Application-Level Multicast Infrastructure*”) in view of Feigenbaum et al. (US 4,718,005), Crockett et al. (US 2003/0154243) and McCanne (US 7,133,928). The remaining claims that depend from claim 1 have been rejected under 35 U.S.C. §103(a) as unpatentable over Scribe in view of Feigenbaum et al., Crockett et al., McCanne and other cited references. The rejections are respectfully traversed for the following reasons.

The Scribe multicasting infrastructure relies on application level routing provided by overlay networks. The Scribe multicasting infrastructure is described at page 3, line 11 to page 4, line 8 of the present application.

Feigenbaum discloses techniques which permit data processing systems linked to nodes of a communication network to create and use alias names on a distributed basis, and thereby to sustain data communications between resources known by various names, and distributed throughout the network, without dependence on a central or master directory (col. 1, lines 38-43). In discussing extension of name communications through nodal bridges and gateways, Feigenbaum describes topological restrictions on the transfer requests across network boundaries (col. 11, lines 14-58). In particular, Feigenbaum describes providing a “hop count” number with a communication to restrict its transfer across network boundaries. This number indicates the number of network boundaries which the communication may cross (col. 11, lines 19-27).

Crockett describes a method and apparatus for registering a user in a group communication network, including a location server that maintains user location information (§0048). Crockett states that the user location information may be the IP address of the client, regardless of whether the client is connected via a wireless or wireline services (§0096).

McCanne discloses an overlay protocol and system for allowing multicast routing in the Internet to be performed at the application level (Abstract). In describing overlay scope, McCanne teaches a hop-based scope wherein the time-to-live (TTL) field in the IP packet header constrains the distribution of a packet. Because the TTL limits the number of forwarding hops that a packet can sustain before being dropped, the source host can constrain the reach of the packet by setting the TTL field to an appropriate value. McCanne also describes an administrative scope wherein routing boundaries are configured borders between scopes, such as between separate organizations. An administrative boundary is imposed by preventing multicast packets that fall within the administrative address range to be blocked at the boundary point (col. 7, line 52 to col. 8, line 3). McCanne also describes techniques for loop avoidance wherein a router forwards a packet only if it arrives from one of its peers within the appropriate transit VIF (Virtual Interface) (col. 19, line 44 to col. 20, line 3).

Regarding claim 1, the Examiner contends, at page 5 of the Office Action, that Feigenbaum shows that a path in the multicast tree is prohibited from reentering the first network region once the path leaves the first network region. Applicants must respectfully disagree. The hop count described by Feigenbaum indicates the number of network boundaries which the

communication may cross (col. 11, lines 19-27). Feigenbaum states that a zero hop count value prevents further forwarding so that messages crossing between B and C could not reenter A (col. 11, lines 46-49).

Applicant submits that adding a hop count to a message, as taught by Feigenbaum, is very different from forming a multicast tree such that *a path in the multicast tree is prohibited from re-entering the first network region once the path leaves the first network region*, as claimed. The hop count described by Feigenbaum does not control a path in the multicast tree, but instead controls a message. Furthermore, according to the teachings of Feigenbaum, a message could reenter a first network region if its hop count had not reached zero. For at least this reason, claim 1 is distinguished over the cited references.

The Examiner concedes that Scribe in view of Feigenbaum and Crockett do not disclose an intermediate node in a path from a subscriber node to the root node of the multicast tree forwarding a subscription message only to a node identified by the node name as belonging to the first network region. The Examiner relies upon McCanne for teaching this limitation. Applicant must respectfully disagree.

As discussed above, McCanne describes a hop-based overlay scope based on a TTL field in the IP packet header, an administrative overlay scope based on routing boundaries and techniques for loop avoidance. However, it is submitted that the techniques disclosed by McCanne are very different from *an intermediate node in a path from a subscriber to the root node of the multicast tree forwarding a subscription message only to a node identified by the node name as belonging to the first network region*, as recited by claim 1. The skilled person reviewing McCanne would not obtain a teaching or suggestion of the above limitation. Nowhere does McCanne describe any actions taken or not taken by an intermediate node in a path from a subscriber to the root node of the multicast tree.

For at least these reasons, claim 1 is clearly and patentably distinguished over Scribe in view of Feigenbaum, Crockett and McCanne, and withdrawal of the rejection is respectfully requested.

Claims 2-12 and 36 depend from claim 1 and are patentable over the cited references for at least the same reasons as claim 1.

No prior art has been cited against claims 25-35 and 38. Since the rejection under 35 U.S.C. §112, first paragraph, has been addressed above, claims 25-35 and 38 are in condition for allowance.

Based upon the above discussion, claims 1-12, 25-36 and 38 are in condition for allowance.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 23/2825 under Docket No. M1103.70235US00 from which the undersigned is authorized to draw.

Dated: October 9, 2009

Respectfully submitted,

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